

# USPS Pricing Engine Web Services

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January 5, 2017.

## Summary

This is the Domestic and International Pricing Engine SDK (version 11.6.0.0) for the January 21, 2018 Release. The following is a list of enhancements included in this release.

### **BNS 613 - Omnibus Price Change - Regulatory Rate Change (Competitive and Market Dominate)**

Prices have been updated in existing price cells for all classes of mail for both Market Dominant and Competitive including extra services and fees.

### **BNS 612 - Changes/Corrections to Mailing Statements – Return Receipt for FCPS & PSG**

Various business customers requested that hard copy Return Receipt be returned to FCPS with Adult Signature Required and Adult Signature Restricted Delivery, and Parcel Select Ground with Adult Signature Required and Adult Signature Restricted Delivery. With this change the postage statements need to be updated to include the hard copy Return Receipt and add "(Electronic)" to Signature Confirmation and Signature Confirmation Restricted Delivery. Postage statements that are affected: 3600-FCM, 3605-R and 3600-PM.

NOTE: THE CHANGE TO RETURN RECEIPT BEHAVIOR ONLY AFFECTS THE DOMESTIC BUSINESS CALCULATOR.

### **BNS 619 – Update Zone chart to reflect PM APO/DPO/FPO processed in Chicago**

Update Zone Chart to reflect APO/DPO/FPO Processed in Chicago

This only affects Priority Mail. Operations have found it is more feasible to process the APO/FPO/DPO Priority Mail (only) in Chicago, for all theaters, then transport to the outgoing facilities.

#### *How will it work?*

We have an "Exception File" in the existing Zone Chart product that is used for Zone 9, Freely Associated States of Micronesia. The file will use what is in the file today or it could have an additional code for the look-up.

### **Changes to the API**

A zone calculation has always applied to all mail services. BNS 619 makes a zone calculation mail service specific. For `GetServicesWithPricing` or `CalculateServicePrice`, the application must use the `Geography::Zone` (legacy calculation) or the `AdditionalZones::AdditionalZone::Zone` collection (in the

case of a mail service exception). For GetZone or GetZones, the application must use the Zone or Zone5DigitZones::Zone5DigitZone collection respectively.

### *GetServicesWithPricing and CalculateServicePrice*

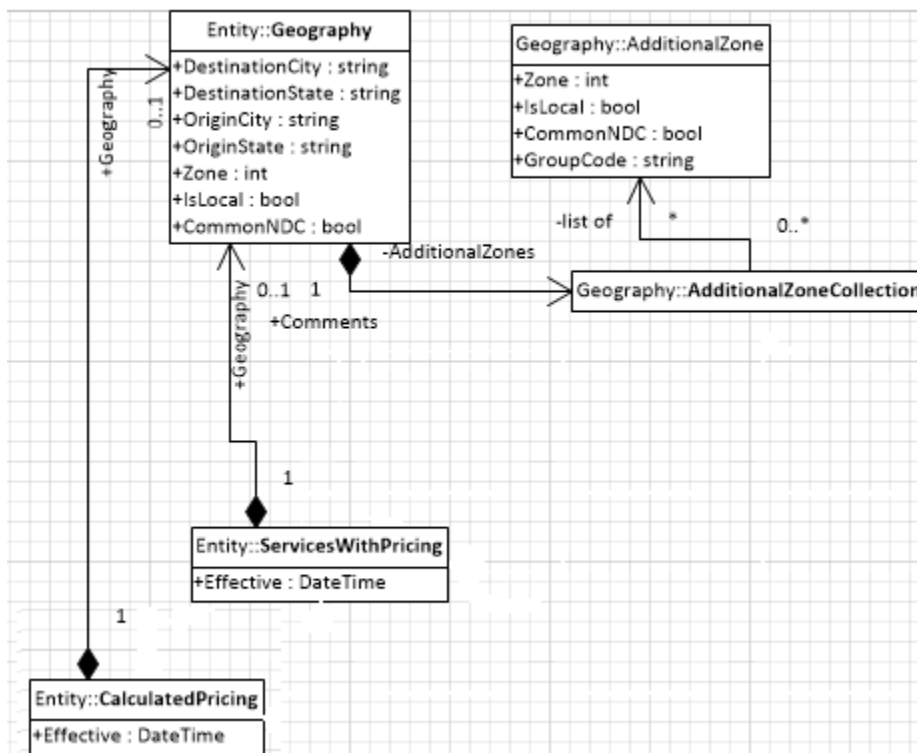
The response structure for the GetServicesWithPricing and CalculateServicePrice methods has been altered to return multiple Zones when needed.

A collection named AdditionalZones of AdditionalZone objects was added to the Geography class. Each AdditionalZone object contains the following fields:

- Zone – the zone
- IsLocal – if the zone is local
- CommonNDC – if the ZIP Codes for the zone have a common NDC
- GroupCode – the Mail Service Group Code that this Zone is used by. The Group Code can contain wildcards values “%”.

The Zone member of the Geography object is used for all Mail Services except when the Mail Service Group Code matches one of the Additional Zone objects. In that case the Zone for the matching object should be used for that Mail Service.

### MODEL DIAGRAM



### *GetZone and GetZones*

The response structure for the GetZone and GetZones methods has been altered to include a GroupCode member as part of the Zone.Zone5Digit class. The Zone.Zone5Digit class is used to return 5

digit ZIP code exceptions. With the addition of the Group Code the exception can now also include Mail Service exceptions for the 3 digit ZIP code.

#### Zone. Zone5Digit Class

##### Namespace

ManTech.Usps.RateEngine.Domestic.Entity

##### Base Class

None

##### Properties

OrigZIPFirst : ZipCode

OrigZIPLast : ZipCode

DestZIPFirst : ZipCode

DestZIPLast : ZipCode

ZoneCount : int

GroupCode: string

## **BNS 630 - Limit the content for First-Class Mail International (FCMI) to documents**

Future process: Modify all systems and IMM to indicate that no "goods" can be mailed as FCMI but retain PS 2976 customs form as an option for documents. This will deter customers from inducing goods/merchandise into the FCMI stream. Customs form will continue to be provided for FCMI.

Current the max value for FCMI letters and large letters (flats) is \$400 with this BNS the max value would be zero.

### **Changes to the API**

#### *GetServicesWithPricing and CalculateServicePrice*

The following rules are now applied to the GetServicesWithPricing and CalculateServicePrice methods:

- FCMI Letters and Large Envelopes will only be returned if the value of the item being mailed is: \$0 (instead of a range from \$0 to \$400)
- The ValueMax attributes for First Class Mail International Letter (or Large Envelope) is set to \$0.00.

#### *Customs Forms*

For the Customs Forms API the following changes have been made to the International request:

- The message "2. The envelope contains goods (i.e., Dutiable Contents)" has been changed to "2. The envelope's contents are potentially dutiable (i.e. Merchandise, Goods)"
- For First-Class Mail Letter
  - The response has been changed to only return "No Customs Needs".

- The weight is now required and is used to determine the outcome. If more than 16 oz. the 2976 Customs Form is required else No customs Form is needed.
- If Is Document is false or the Content Value is not 0.00, the Prohibited Exception is thrown
- For First-Class Mail Large Envelope
  - The response has been changed for weights under 16 ounces that “No Customs Needs”
  - Is Greater Than 3/4 Thick is now required and is used to determine the outcome. If true the 2976 Customs Form is required else No customs Form is needed.
  - Is Uniformly Thick is now required and is used to determine the outcome. If true the 2976 Customs Form is required else No customs Form is needed.
  - The weight is now required and is used to determine the outcome. If more than 16 oz. the 2976 Customs Form is required else No customs Form is needed.
  - If Is Document is false or the Content Value is not 0.00, the Prohibited Exception is thrown
- The following message is also now returned for First-Class Mail Letter and Large Envelope: "Merchandise is not allowed in First-Class Mail International. The item must be mailed using Global Express Guaranteed service, Priority Mail Express International service, Priority Mail International service, or First-Class Package International Service."

### ICL Updates

The ICL has been updated with most recent country regulations. FCMI references have been removed where required.

### CR 9835 - USPS Retail Ground for CNS

USPS Retail Ground services/prices available for Click ‘N’ Ship when the Origin ZIP Code is APO/FPO/DPO.

### Changes to Client Maps

#### Click-N-Ship

USPS Retail Ground will be returned when the sender address is an APO/FPO/DPO.

#### Price Calculator and Mobile

USPS Retail Ground online will be shown as available when the sender address is an APO/FPO/DPO.

Note: All current USPS Retail Ground restrictions are maintained.

### Updated Holidays

The Holiday data has been updated to reflect the 2018 Holidays.

Date	Holiday
Monday, January 1	New Year’s Day
Monday, January 15	Birthday of Martin Luther King, Jr.
Monday, February 19	Washington’s Birthday
Monday, May 28	Memorial Day

Wednesday, July 4	Independence Day
Monday, September 3	Labor Day
Monday, October 8	Columbus Day
Monday, November 12	Veterans Day
Thursday, November 22	Thanksgiving Day
Wednesday, December 25	Christmas Day

## CR 9922 – Allow the Shipping Date Span to be Configurable

The Shipping Date Span for both the Domestic and International Pricing Engines is now set to plus or minus 37 days. The Shipping Date Span previous was set to plus or minus 30 days. The Pricing Engines uses Shipping Date Span value to validate if the Shipping Date submitted is within the approved range. If the submitted Shipping Date is outside the approved range an exception is returned notifying the caller that the Shipping Date must be within the improved range.

## Executing the January 2018 Price Engine

The Pricing Engine is capable of executing business logic from multiple versions, re: 2017 Price Change, 2018 Price Change, etc. The Pricing Engine uses the Shipping Date to determine which business logic and pricing data to use. The “January 2018 Price Change” date is set to 1/21/2018. Shipping dates prior to the “January 2018 Price Change” date will return results basic on September 2017 Price Change business logic and pricing data, shipping dates after the to the “January 2018 Price Change” date will return results basic on January 2018 Price Change business logic and pricing data.

## Impact on Existing Applications

WSDLs have been update; you may have to rebuild your applications.

## Reported Defects and Change Request

BUG - International Extra Services unavailable	<b>Corrected</b>
BNS 613 Omnibus Price Change - Intl Postal Money Orders prices incorrect	<b>Corrected</b>
BNS 630 - The Value of content return should be \$0	<b>Corrected</b>
BUG - BNS 630 – Error Message Correction for FCMI	<b>Corrected</b>
BUG 10020 - Issue where the ShippingDate is set to DateTime.MinValue	<b>Corrected</b>
BUG 10038 - BNS 619 - Object Reference Error on Postcards	<b>Corrected</b>

## BUG - International Extra Services unavailable

### Steps to Reproduce

The Insurance extra service is not appearing for GXG, PMEI, and PMI on the retail calculator. The header is repeated. The exception table doesn't line up on the rows when it displayed on a small screen

### Acceptance Criteria

Insurance Extra services should appear for GXG, PMEI, PMI on retail calculator.

## **BUG - BNS 613 Omnibus Price Change - Intl Postal Money Orders prices incorrect**

### **Steps to Reproduce**

Use the Intl Test Tool

Choose the GetMailingFees tab

On the Fees Keys Drop Down, choose InternationalPostalMoneyOrder

Observe the MoneyOrder Price and Cost are 6.45 and the InquiryFee price and cost are 8.55.

### **Acceptance Criteria**

MoneyOrder Price and Cost should read 8.55 and the InquiryFee price and cost should read 6.45.

## **BUG - BNS 630 - The Value of content return should be \$0**

### **Steps to Reproduce**

Launch the International Test Tool 11.6.0.0

Click on the tab - CalculateServicePrice

Enter the following:

Service ID - 4; Delivery Option - XX

Caller ID - 14; Src ID - 4; Customer Type - 004R4

Shape and Size - Letter

Zip Code - 20120 to Country ID 10013

Weight 1 ounces and additional input - dvi - .01

Click on "Get"

Note the error received is incorrect - Message: The Item Value exceeds the products allowed \$400.00 Maximum Value for Content.

It should not allow any product's over \$0.00

### **Acceptance Criteria**

Message should read The Item Value exceeds the products allowed \$0.00 Maximum Value for Content.

## **BUG - BNS 630 – Error Message Correction for FCMI**

### **Acceptance Criteria**

Message should read The Item Value exceeds the products allowed \$400.00 Maximum Value for Content for First Class Mail International

## **BUG 10020 – Issue where the ShippingDate is set to DateTime.MinValue**

### **Issue**

The issue is that when calling the Pricing Engine some of the calls are using the wrong pricing and business logic. It was discovered that the only way this could be happening is when the configuration file

has the default database set to the previous database and the Shipping Date for the call to the Pricing Engine is set to January 1, 0001 (MinValue). In the SDK when a client creates a request object for the “Get Services with Pricing” or the “Calculate Service Price” interfaces, the Shipping Date defaults to the January 1, 0001 value. The decision to default to January 1, 0001 was made many years ago way before the implementation of Advance Pricing. Prior to Advance Pricing the shipping date was only used for service commitment, if the client had no need of the service commitment the shipping date of January 1, 0001 had no effect on the response. With the addition of Advance Pricing the shipping date is now used to also determine what pricing and business logic to return. This change was made in Feb 2017 with release notes outline that the shipping date is now required for Advance Pricing. The default database was implemented as part of the Advance Pricing update to lower the impact on SDK users. The default allows the SDK users to continue with the shipping date default to the January 1, 0001. But once the configure file on the SDK system has been updated to use Advance Pricing the shipping date needs to be set by the client. If the Pricing Engine receives a shipping date outside the range of the price changes defined in the configure file, the default database is used. Since January 1, 0001 is always outside all Pricing Changes the default would be used on these requests.

### **Solution**

Made a change to the Pricing Engine’s method that determines which database to use for the request to handle a shipping date of January 1, 0001 as today’s date. This change would have no impact on any other part of the Pricing Engine since all that is being done is when the shipping date received is January 1, 0001 the business logic for a shipping date of today’s date would be used. In other words January 1, 0001 would mean to that method and that method only a “Shipping Date” of today. This change is to a single library (RateEngine\_Framework.dll). This change corrects the behavior for all systems and wouldn’t require any downstream systems to make a change.

## **BUG 10038 - BNS 619 - Object Reference Error on Postcards**

### **Steps to Reproduce**

1. IDCard = 14, 23, 023C4 (any client id can be used that returns Postcard)
2. Postcard, PostcardLarge
3. Leave the Origin and Destination ZIP codes blank
4. 1 oz.

**Message: Object reference not set to an instance of an object.**

### **Acceptance Criteria**

The Postcard and Stamped FCM Letter objects are returned.